STCG SUBCON SUBGROUP MEETING MINUTES

April 23, 1997

In Situ Redox Manipulation TDI Proposal

Fred Serier (DOE-RL) opened the meeting by asking Paul Danielson (Nez Perce Tribe) to articulate his concerns regarding the In Situ Redox Manipulation (ISRM) TDI Proposal. Paul's main concern is that DOE should have a funding scheme in place for monitoring and potential mitigation throughout the barrier life. He would like to see a signed agreement to monitor and mitigate any adverse effects of a reduced plume. He specifically mentioned a performance bond for drilling, re-oxygenation, sparging, etc. as needed.

Bob Cook (Yakama Indian Nation) was then asked to describe his concerns about the proposal. Bob believes that the source of the chromium in the 100-D Area is likely the outfall pipe. He thinks that DOE should characterize around the pipe, in the vadose zone, and in the groundwater. He also stated that DOE should develop a comprehensive plan to cover the entire waterfront, not just 500 feet. He wants to see a complete plan, regardless of whether pump and treat or ISRM technology is used. Bob also objects to the TDI using R&D funds for deployment. He believes that DOE should increase funding for long-term R&D and decrease funding for commercialization activities.

Dennis Faulk (EPA) agrees with Paul Danielson about long-term monitoring, but he believes that the TDI proposal is important because it may make the ISRM technology deployable. It will tell us if ISRM is viable so we can discontinue the pump and treat operations.

John Fruchter (PNNL) discussed the ISRM treatability test, which will run through September 1997. TDI presents an opportunity to obtain more outside funding for this technology and to expand the barrier to 500 feet. If successful, DOE will go for a final Record of Decision for the entire waterfront in Phase 4, according to Mike Thompson (DOE-RL).

John mentioned that Phase 3 of the treatability test will be delayed for about a year to allow characterization to be done, to study the treatability test results, and to drill four additional wells. The ER Program does not have a detailed understanding of the chromium plume yet, and they are willing to invest an additional $250K for characterization to support the TDI proposal.

Bob Cook suggested using the cone penetrometer and x-ray fluorescence technology to do the characterization. He stated that he supports the ISRM technology, but thinks the technology deployment should be part of an integrated plan for cleaning up the entire 100 Area rather than just a portion of the waterfront.

SCFA is giving Hanford $300K for testing to cover uranium studies, extra monitoring wells, and to start column studies of re-oxygenation. They have additional funding for next year, too. Hanford is submitting a TTP to SCFA to continue monitoring the 100-H Area.

In summary, EPA and Ecology stated that they strongly support submittal of this TDI proposal, while the Yakamas, the Nez Perce, and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) stated that they did not. Donna Wanek summarized the critical issues that were mentioned:

- long-term monitoring
- characterization of the aquifer and the vadose zone
- vadose zone/aquifer integration
- scale of the test.

After this Subgroup meeting ended, DOE-RL representatives (Mike Thompson and Arlene Tortoso) met with representatives from the Nez Perce (Paul Danielson and Stan Sobczyk) and the CTUIR (Stuart Harris) to try to resolve the issues. The main concerns of the Nez Perce were the need for: 1) long-term groundwater monitoring, and 2) assurance that DOE would respond with mitigation measures if the groundwater did not re-oxygenate before it upwelled into the Columbia River. DOE committed to a number of specific actions to resolve these concerns, and in return they received verbal agreement from the Nez Perce and the CTUIR to proceed with the proposal.

Electrical Resistance Tomography TDI Proposal

Susan Narbutovskih (PNNL) informed the Subgroup that there were two Electrical Resistance Tomography (ERT) proposal concepts developed, one for TWRS and one for RCRA groundwater monitoring. These two concepts have now been combined into one proposal to address the needs of both user groups. The groundwater monitoring effort will be supplemented with vadose zone monitoring in a tank farm. The ERT technology, which will provide new plume detection and monitoring capabilities, received strong support from Ecology and the Tribes. Groundwater monitoring doesn't detect a problem until the contaminant is actually in the groundwater. Vadose zone monitoring would detect a plume before it reaches the groundwater, so it offers much better protection. The proposal identifies a variety of deployment sites at Hanford, as well as INEL, Rocky Flats, the Nevada Test Site, and other non-DOE sites. The Subgroup agreed that this TDI proposal should be submitted.

Bob Cook added that the ERT technology should provide data to validate the performance assessments (PAs) for the tanks. He suggested that Susan and her team talk to Fred Mann (TWRS) to see what data is needed for the PAs.

Soil Flushing Technology in the N-Area

Dib Goswami (Ecology) led discussions on the application of soil flushing technology in the 100-N Area. Jeff Serne (PNNL) gave a technical presentation on the subject and discussed hydrologic concerns such as plume capture and river influence. Soil flushing needs thorough bench-scale studies and cost/benefit analyses prior to a pilot-scale demonstration in the field. However, the technology seems to have good promise, and the Subgroup should review it in more detail for

future consideration. There will be no funding for the technology until the final ROD for N-Springs is issued in September 1997. DOE and Ecology may want to pursue EM-50 funding at that time.

Freeze Barriers

Kim Koegler (BHI) stated that BHI is continuing to evaluate the feasibility of freeze barriers in combination with other technologies. If anyone has a specific application in mind, they should tell Kim.

Other Announcements

Kim reported that there was a vendor demonstration of a magnetometer cart for characterization of buried waste on April 22 at Hanford's "Little Egypt" test site. This is one of the technologies included in the Advanced Characterization Proposal for the 618-4 burial ground.

Nancy Uziemblo (Ecology) reported that there will be public meetings this month on certification of environmental technologies in Washington State and reciprocity with other states. One meeting will be held on May 14 at the Ecology office in Kennewick at 1:30 p.m. This effort is mainly focused on radioactive and mixed waste technologies.

Next Meeting

The next Subcon Subgroup meeting will be held on May 28, 1997 in the Bechtel Building. The specific time, location, and agenda will be distributed a week or two before the meeting.

Attendees

Gary Ballew (PREC)
Joe Devary (PNNL)
Linda Fassbender (PNNL)
Dennis Faulk (EPA)
John Fruchter (PNNL)
Dib Goswami (Ecology)
Stuart Harris (CTUIR)
George Henckel (BHI)
Tony Knepp (BHI)
Kim Koegler (BHI)
Wayne Martin (PNNL)
Susan Narbutovskih (PNNL)
David Olson (DOE-RL)

Fred Serier (DOE-RL)
R. Jeff Serne (PNNL)
David Shafer (DOE-TWRS)
Stan Sobczyk (Nez Perce Tribe)
Wayne Soper (Ecology)
K. Michael Thompson (DOE-RL/ER)
Arlene Tortoso (DOE-RL)
Nancy Uziemblo (Ecology)
Donna Wanek (DOE-RL)